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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,824	11/06/2001	Andreas Wittman	476-2024.1	8714

7590 01/13/2003
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EXAMINER

NGUYEN, DUNG T

ART UNIT PAPER NUMBER

2828

DATE MAILED: 01/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,824

Applicant(s)

WITTMAN ET AL.

Examiner

Dung (Michael) T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-30 is/are rejected.
- 7) ☒ Claim(s) 18 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

In response to the communications dated 09/11/02 through 12/18/02, claims 15-30 are pending in this application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 15, it is not clear that the Applicant would like to claim the method of manufacturing a semiconductor laser or the method of manufacturing a semiconductor laser facet coating layer.

Furthermore, claims 15 and 21 fail to define as how a PE-CVD processes and controls the process parameters.

With respect to claim 18, it is not clear that S.sub3.N.sub4 is incorrectly printed or not.

With respect to claims 28-30, it is not clear that claims 28-30 are dependent on claim 21 or not.

The remaining claims are dependent on the above rejected claims 15 and 21 and therefore are also rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-17 and 9-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno et al. (USPN 6285700) (herein after Ueno) in view of Arao (USPN 6432620) (herein after Arao).

With respect to claims 15, 19-21 and 23, Ueno show in Fig.7 an AlGaAs semiconductor laser emitting at a given wavelength and having an emission facet with a coating layer 1 of a predetermined reflectivity, wherein the coating layer is homogeneous and of a pre-selected thickness (col.11, 1.25-31 and 60-66, TABLE 1). Ueno do not disclose the PE-CVD process and the PE-CVD control. However, Arao teaches a PE-CVD process and a PE-CVD control (col.14, 1.5-24). For the benefit of manufacturing a semiconductor laser coating layer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Ueno the PE-CVD process and control as taught by Arao.

With respect to claims 17 and 25, Ueno disclose a SiON coating layer refraction index of 1.46-1.96 (1.96 met the claim limitation of at least 1.83) (col.12, table 1) for an AlGaAs laser.

With respect to claim 22, Ueno show in Fig.3B a coupling of the standing wave between the semiconductor body and the coating layer occurs at the minimum of the standing wave.

With respect to claim 24, Arao discloses a coating layer (film) comprising hydrogenated silicon nitride oxide (col.14, 1.5-8).

With respect to claims 16 and 26, Arao discloses the thickness of the hydrogenated silicon nitride oxide coating layer (film) (col.14, 1.5-7).

Allowable Subject Matter

Claims 18 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Citation of The Pertinent References

The following US patents are being made of record, even though they were not relied upon in this Office action, for being similar in subject matter, and may be relied upon in any future Office Actions: USPN 6323052, 6396864, 5710067, 6347107, and 5660895.

Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (703) 305-7159. The examiner can normally be reached on 8:30 - 17:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 306-5511 for regular communications and (703) 306-5511 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

Nguyen (Michael) Dung
January 9, 2003


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